POWERSOURCE

SPRING '15 | MAKING HOUSE CALLS | LINE TECH ACADEMY | CREATING ROBOTS | EAT. SLEEP. ROW.

# from the CEO

In February, Santee Cooper made the strategic decision to take a bond issue to the market for the 40th time since 1999. That decision resulted in the Santee Cooper Board of Directors approving the sale of $1.1 billion in revenue obligation bonds.

We had healthy commitments from large institutions and solid investor support in the ABCD issue. Specifically, the board approved the sale of $599 million in tax-exempt Series A, $64.9 million in tax-exempt Series B, $270.2 million in tax-exempt Series C and $169.7 million in taxable Series D bonds at attractive interest rates. The all-in true interest rate was 4.1 percent.

The Santee Cooper Investor Relations team has put a lot of time into keeping Santee Cooper's finances transparent. They also put a lot of energy into keeping the rating agencies and financial communities informed. By keeping ourselves market ready and approaching the market strategically, Santee Cooper saw strong investor interest and was able to upsize the new-money portion of the bond issue by about $100 million, to $600 million. The new money will be used for capital projects, primarily Santee Cooper's share in the ongoing construction of additional units at V.C. Summer Nuclear Station.

About $500 million of the amount in February's bond issue was for refunding bonds to refinance a portion of Santee Cooper's debt in order to take advantage of favorable interest rates. The refunding produced net present value savings of $58.8 million over the life of the bonds. Through strategic debt restructuring, we realized annual savings of $79 million in 2014.

Santee Cooper continues to keep strong financial ratings. The 2015 issue drew a rating of A+ from Fitch, AA- from Standard & Poor's and A1 from Moody's.

Moody's specifically noted, "Santee Cooper has an established sound financial record." All three rating agencies issued Santee Cooper a stable outlook and reaffirmed long-term debt ratings.

If you would like more information or the Official Statement on Santee Cooper's bond issues, I invite you to contact Santee Cooper Bondholder Relations at 1-877-246-3338. You also may find the information posted at www.santeecooper.com/investorrelations.

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*Kevin F. Langston*

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**A lineworker's belt is equipped with various tools needed to complete a multitude of jobs. The belt can weigh upwards of 40 lbs. fully loaded.**

santee cooper®


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# MAKING HOUSE CALLS

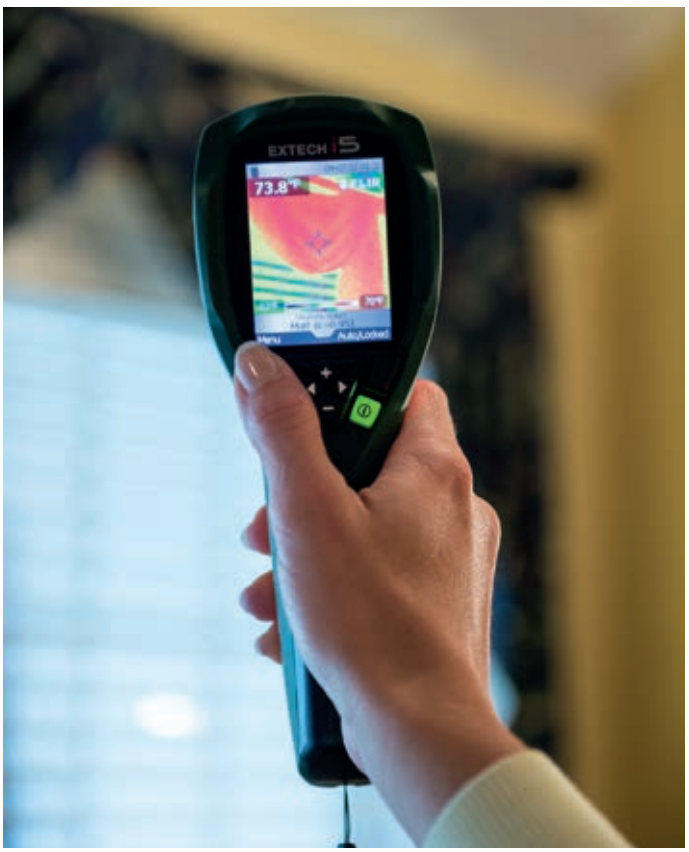
By Susan Mungo

Photography by Jim Huff

It is time for a checkup. We often associate those words with our yearly health physical and dread it. We know it's beneficial, providing good information that lets us know what is going on inside our bodies, and yet we put off that doctor's visit.

Did you know that Santee Cooper offers free checkups? No, the utility has not expanded into the medical field. This is a checkup for your home and tells you things such as how well your home is doing to keep the cool air in during the summer and the warm air in during the winter. Santee Cooper even has "energy doctors," referred to as Energy Advisors, who actually make old-fashioned house calls.

And if the diagnosis is your house needs some work, Santee Cooper may even loan you money or give you a rebate to help offset the cost of suggested upgrades. It is not too good to be true; it is all a part of what is called the Smart Energy Existing




**Above:** Santee Cooper Energy Advisor Amanda Brown and residential customers Tim and Debbie Tilma discuss the findings from a home energy checkup, including next steps and possible rebates from Santee Cooper.

**Right:** Brown uses an i5 thermaCam, which shows where cold air seeps into the Tilma's home around their living room windows.

Homes Program. This is an integral part of Santee Cooper's Reduce The Use efforts to help customers reduce the amount of electricity they use in their homes.

It all starts with a house call from a Santee Cooper Energy Advisor like Amanda Brown. Brown has been a Santee Cooper employee for 14 years and an Energy Advisor for the last 11. When she gets a call, it is often from a customer having issues with a high bill or a problem with a heat pump. After making an appointment to visit a customer's home, she arrives with her bag full of tips and tools — things that help her determine if the home has problems with the heat pump, ductwork, seals around windows or doors, or other possible issues. Once she determines problem areas, Brown makes recommendations to the homeowner on energy efficiency upgrades that can improve the affordability of a home year-round.

The process sounds simple, but it requires expertise. One tool in Brown's bag is called an i5 thermaCam. This device shows areas where air from the outside is coming into the home or vice versa. In the winter, the faulty area shows a blue line and in the summer, red. Another piece of equipment often used

**Left:** The fan on the blower door setup works to push air in or pull air out of the home to determine how air tight it is. An Energy Advisor uses this information to determine if there are leaks in the ductwork, around the windows and doors, or around outlets in a home.

**Below:** Brown and Tim Tilma inspect the newly-installed air handler and the duct system located in his attic.


**Replacing a heat pump can be a major household expense. Through assistance from Brown, the Santee Cooper loan program and a Santee Cooper Trade Ally, the Tilmas replaced their old unit with a more energy efficient one.**

is a fan fitted inside a plastic door that temporarily replaces the front door of the home. It sounds odd, but this equipment performs a function called the blower door test, and it identifies air leaks around doors, windows, outlets, light fixtures, and even plumbing penetrations and ductwork.

Energy advisors also spend time in a homeowner's attic or crawl space evaluating the condition of ductwork and insulation. Windows in a home are also assessed. And the two big energy users, the water heater and heat pump, are checked for efficiency.

Once the home has been checked and recommendations made for energy improvements, the homeowner is in control of their home's energy health. He or she can decide which improvements to make or can choose to make every improvement the Energy Advisor suggests.

Certain improvements offer rebates from Santee Cooper. Heat pump replacements, doors, insulation, water heater, duct improvements and a programmable thermostat are all things that may provide a rebate to the customer if improvements were needed and made in those areas. These rebates give the homeowner added incentive to make the improvements that will in the long run help reduce their monthly energy usage.

Customers who qualify also have the option to apply for a low-interest loan from Santee Cooper to help pay for their recommended energy saving home improvements. Right now the loan rate is at 1.25 percent for qualified applicants, and homeowners can apply for loans ranging from $500 to $20,000. Customers are allowed up to 60 months to repay loans over $1,000.

Tim and Debbie Tilma, who live in Conway, decided to give Santee Cooper a call when they had trouble with their heat pump. Other than the heat pump, the Tilmas did not really expect issues with their 13-year-old home, a home that had won the City of Conway Quattlebaum Award for New Construction Quality when built. Regardless, they asked Brown to do a complete checkup of their home.

During Brown's visit at the Tilma residence, she determined the heat pump needed to be replaced. Then she completed her checkup of the home, including inspecting ductwork and insulation and completing a blower door test on the house. As they expected, the test revealed the Tilma house was pretty air tight. Brown found no

issues with insulation or ductwork but made some suggestions on lighting to help the Tilmas save energy.

The Tilmas say they were very pleased with the process and the outcome.

“Amanda was great to work with and made the process very easy,” Tim said. “Not only did we get her advice on what to do, we were also able to use the low-interest Santee Cooper loan to purchase our heat pump, which spread the payment over a five-year period rather than all at one time.”

The Tilma’s heat pump contractor was a Santee Cooper Trade Ally. Santee Cooper works with qualified Trade Allies to help customers with their home energy efficiency needs. There is a list of qualified technicians and installers for everything from heat pumps to water heaters. The key to working with a Trade Ally is they know what specifications meet the energy saving requirements for Santee Cooper rebates. Plus, they are trained in the proper installation of their products.

Brown said relationships are important in her job, and she has built good ones with the Santee Cooper Trade Allies.

“We help each other,” said Brown, speaking of both Trade Allies and fellow Santee Cooper Energy Advisors. “I have great relationships with the Trade Allies I work with, and I know I can depend on them to produce quality products and installations for my customers.”

Brown also works to establish a relationship with every customer she works with and said, “The best part of what I do is helping a homeowner find and fix a problem that will in turn save them money.”

She is just one of several Energy Advisors at Santee Cooper who are certified by the Building Performance Institute to perform free energy checkup services for homeowners. Herman Holmes, supervisor of residential energy services, is available if an Energy Advisor needs a consultation or assistance with a home visit.

Holmes said what his department does on a daily basis makes an impact on customers’ lives.

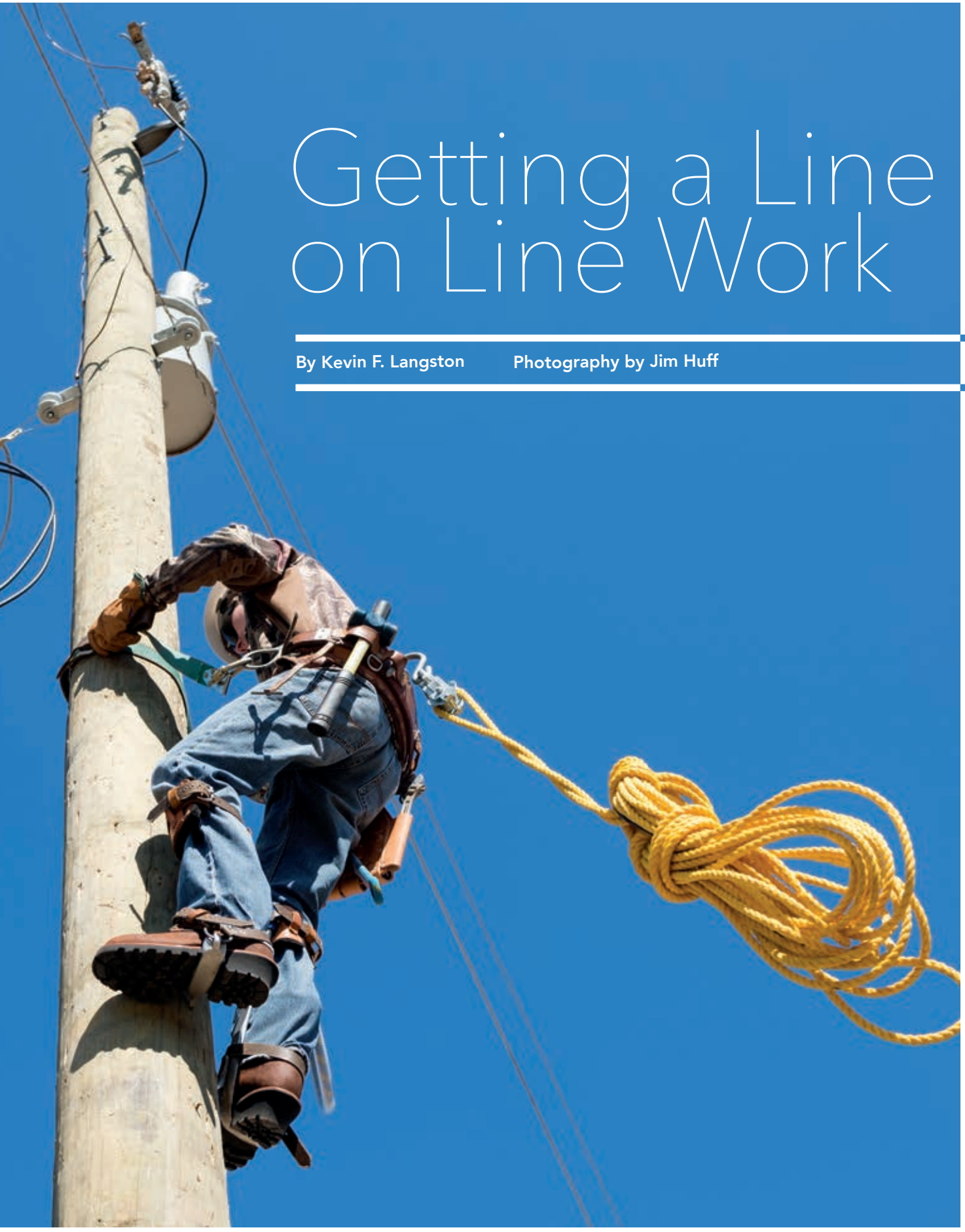
“When you have a positive and sometimes transformative effect on someone’s quality of life, it is a very special experience. We are very fortunate to have that opportunity on a daily basis,” he said.

If a customer is not ready to call in one of the energy experts, Santee Cooper offers another option. Santee Cooper partnered with EnergyEarth to provide an online, do-it-yourself home energy checkup. This is a powerful tool that takes users through every element of their home that pertains to energy usage or savings, and it will help identify efficiency upgrade needs in the home that could save homeowners electricity and money. There’s also suggested product upgrades that can be ordered right from the EnergyEarth website.

Inviting a Santee Cooper Energy Advisor into your home or doing the online check-up is beneficial.  It’s an important step to better energy health and lower energy bills.

# Getting a Line on Line Work

By Kevin F. Langston  Photography by Jim Huff



Nick Motalo left his native Chicago in 2006 to ply his trade as an ironworker at the construction of the ill-fated Hard Rock Park located off U.S. Highway 501 in Myrtle Beach. The job brought him here, and the weather convinced him to stay.

Nine years later, Motalo is among the inaugural class of students in Horry Georgetown Technical College's (HGTC) Electrical Lineman Technician certification program.

"I was taking classes for an associate degree in engineering technology, but I switched over as soon as this opened up," Motalo said. "These are good jobs to have. I can help support my family with this job. Plus, I already knew I'd be comfortable with the physical work."

According to the HGTC literature, the Electrical Lineman Certificate program "prepares the student to enter the electric or telecommunications industry as an apprentice with a broad understanding of the skills, knowledge, safe work practices, and physical ability required to perform line work. Students receive classroom and field training in math, electrical circuit analysis, power systems, and transformer theory, as well as safety and climbing techniques."

The three-month program is 17 credit hours spread over six courses, which combine classroom lecture with hands-on training at a simulation distribution system of poles, transformers and lines donated and installed by Santee Cooper.

At the helm is Scott Shoemaker, who retired in December 2014 after 35 years of line work with Santee Cooper.

"I started as an apprentice and moved all the way up to area supervisor of Myrtle Beach," he said.

As area supervisor, Shoemaker oversaw four distribution line crews and also sat in on the hiring teams that interviewed new line technician candidates.

"About three years ago, we started getting students from Trident Technical College down in Charleston," Shoemaker said. "They've had an electrical line worker (ELW) certification program there for a few years."

**Horry Georgetown Technical College's Electrical Lineman Technician certification program combines classroom lecture with hands-on training at a simulation distribution system. The single-semester course is comprised of six classes totaling 17 hours.**

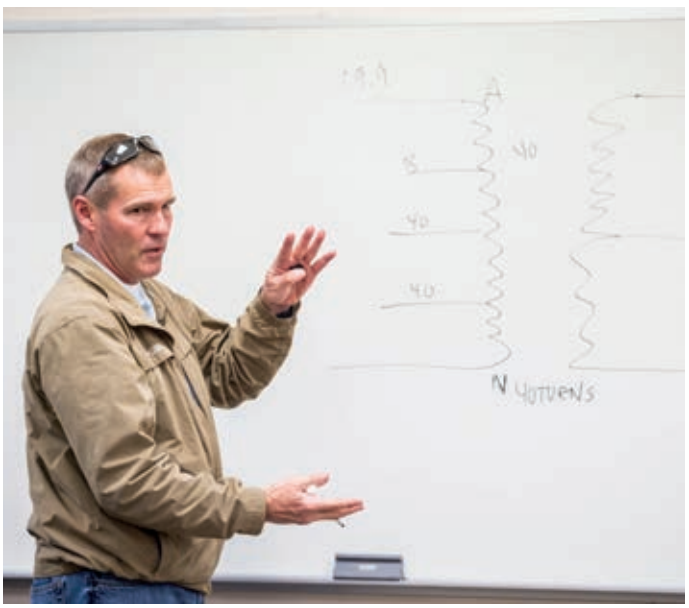
"It was clear that the interest was there, and the need was definitely there," Shoemaker said. "It was full steam ahead."

While the applicants with ELW certifications weren't a shoo-in for the openings, Shoemaker said they were often the stronger candidates.

"With some applicants, you just weren't sure what you were getting. But whenever we'd interview a graduate from an ELW program, we knew this person wanted to be a career line technician," he said. "We saw no reason at Santee Cooper why HGTC couldn't also have an ELW program. So we approached them about it."

As their skilled workforces age and approach retirement, employers like Santee Cooper have evolved their approach to staffing and employee recruitment, especially for the more technical positions. Santee Cooper's Power Associates scholarship program, for example, has worked with technical colleges throughout South Carolina to offer students a two-year associate degree and on-the-job training at Santee Cooper power plants and substations, and on their electrical lines.

For HGTC's Electrical Lineman Technician program, Santee Cooper worked with the school to design a program that would



**Instructor Scott Shoemaker (top) is a Santee Cooper retiree with 35 years of line work experience. Calling on that experience and the course materials, Shoemaker shows his students how implements like this rope (below) can be a handy tool in a lineworker's arsenal.**

produce the type of candidates that could succeed in a career in the electric or telecommunications industries. HGTC also surveyed area utilities to gauge their hiring needs and level of interest in hiring graduates from an ELW certification program.

"It was clear that the interest was there, and the need was definitely there," Shoemaker said. "It was full steam ahead."

Except the program didn't have an instructor. Yet.

"HGTC told me I was the obvious choice and after mulling it over for a bit, I retired six months ahead of schedule and became an associate professor," Shoemaker said.

The class roster quickly filled up with 16 students, and Shoemaker has been told the program is booked through the middle of 2016 — including condensed summer sessions.

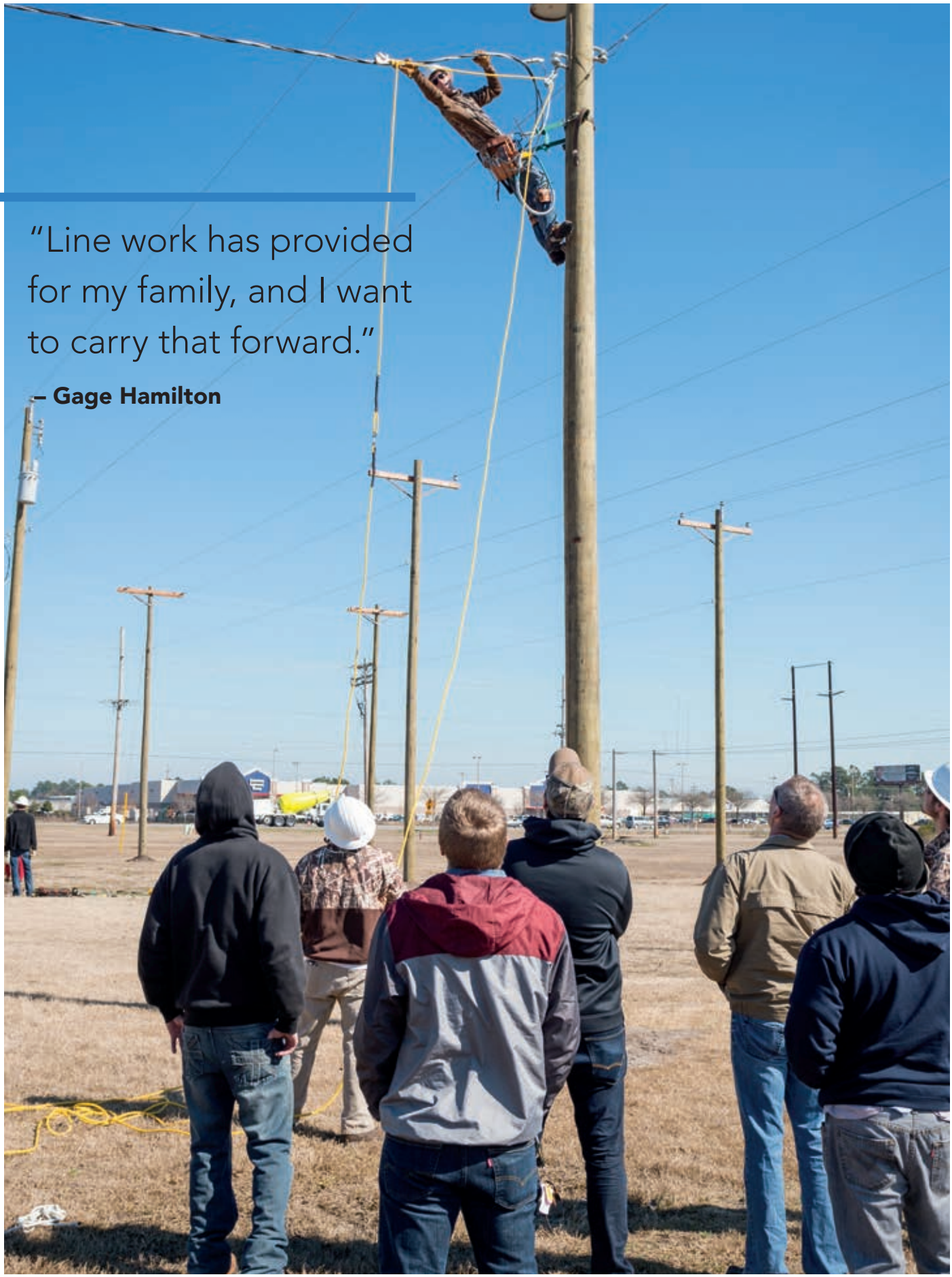
**On the simulation distribution system, Shoemaker teaches students how to properly use safety equipment like fall-arrest harnesses (above) and insulated poles called "hot sticks" (above, right). The simulation system is grounded and de-energized for the students' safety.**

"These jobs have good pay and good benefits. But more than that, these are lifelong careers," Shoemaker said. "You don't find too many lineworkers who lack ambition, and that kind of attitude will serve them well in the workplace."

Reginald Graves has been a contract employee with Santee Cooper's investment recovery department for five years. Working at Santee Cooper's Horry-Georgetown Division office in Myrtle Beach, Graves said he'll watch the line crews coming and going throughout the day.

"That's where I want to be," he said.

Before HGTC began offering its program, Graves had considered registering for Trident Technical College's ELW certificate program in Charleston.



"Line work has provided for my family, and I want to carry that forward."

**– Gage Hamilton**

Graves has applied for lineworker openings at Santee Cooper over the years, and he saw an ELW certification as a way to improve his skillset and become a better job prospect.

"I've given Santee Cooper five years and I want to give them more," he said.

In the meantime, Graves and his classmates are learning important lessons about line work not only from their course materials and their instructor, but also from each other.

"Lineworkers are a family," Shoemaker said. "I saw it in my 35-year career, and I see it here. Even in a classroom environment, it's a team mentality. They've got each other's backs, and that's important because they're together Monday through Thursday from 8 a.m. to 4 p.m., and it's no different when you're a professional lineworker. You'll go through periods when you're seeing your co-workers more than your family, and this is the kind of attitude they will need to take with them into the job — especially when it comes to safety."

The camaraderie carries over from the classroom to the simulation distribution system. This is where the students are taught how to climb and perform the myriad overhead tasks demanded of lineworkers. Shoemaker said the class also will make field trips to observe underground line work.

The students share their equipment — anything from hardhats and boots to gloves and belts — and their encouragement. There's plenty of playful ribbing as the students watch their classmates scale a pole or learn the intricacies of handling a hot stick, but there is always an undercurrent of support.

"Listening to these guys carry on, sometimes it reminds me of my years working with the line crews," Shoemaker said. "These guys are competitive. I was surprised by how driven they are, actually. Their generation has been called the 'give me' generation, but these guys go for it."

Gage Hamilton is driven by an ambition to become his family's third generation of lineworkers after his grandfather, father and uncle.

## ELECTRICAL LINEMAN TECHNICIAN COURSES (HRS)

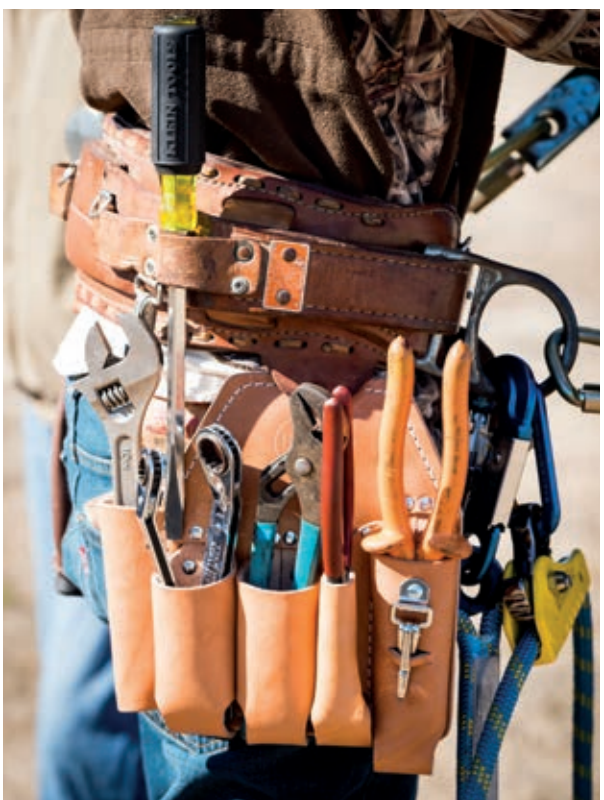
| | |
|---|---|
| **ELW 110** | Electrical Computations (2) |
| **ELW 111** | Introduction to Electrical Line Worker (3) |
| **ELW 112** | Introduction to Electricity (3) |
| **ELW 114** | Overhead Line Construction I (3) |
| **ELW 211** | Underground Line Construction I (3) |
| **ELW 231** | Electrical Power Systems (3) |

"I've seen firsthand how demanding this job is, but I've also seen how rewarding it can be," Hamilton said. "Line work has provided for my family and I want to carry that forward."

Shoemaker admits teaching wasn't part of his retirement plan, but he's found the work immensely rewarding.

"It's been amazing to share some of the things I learned over my career from the great co-workers and supervisors I had along the way. Line work is near and dear to my heart, and I'm excited for these students," he said. "After a couple of years on the job, they're going to learn like I learned that you're a public servant. You're working for the public. And that attitude will carry over into your personal life. You'll be more inclined to help your neighbor or volunteer at your kid's school. Doing this job just makes you a better citizen."

**Previous page: Students look on as one of their classmates works from atop a de-energized pole at the simulation distribution system. Shoemaker (fifth from the left) provides instruction throughout. (Right) Even a lineworker-in-training's tool belt can quickly become weighed down by the assortment of tools required to do the job.**



# Creating confidence, pride and robots

By Nicole A. Aiello

Photography by Jim Huff

Seventeen-year-old Aubrey Edmonds leans forward, tapping her pen eagerly on her knee as a strand of auburn hair escapes from behind her ears. A kaleidoscope of colors and lights shining off the playing field are reflected on her face. Amid a slight metallic taste in the air and rounds of cheers from the crowd, her concentration never wavers as she draws numbers and circles on the stack of papers in her lap, statistics of her opponents' actions.

Maxwell Lamb doesn't see Edmonds, but he knows she and his other teammates are among the hundreds watching. With the sound of the buzzer, the 17- year-old steps over the line that just seconds ago held an invisible barrier. Hands on the controls, he is now in the middle of the action, peering through the clear Lexan that separates him from the playing field. Lamb and two other team members make up the trinity that controls their portion of the game. The time has come to see if their robot has what it takes to progress to the finals.

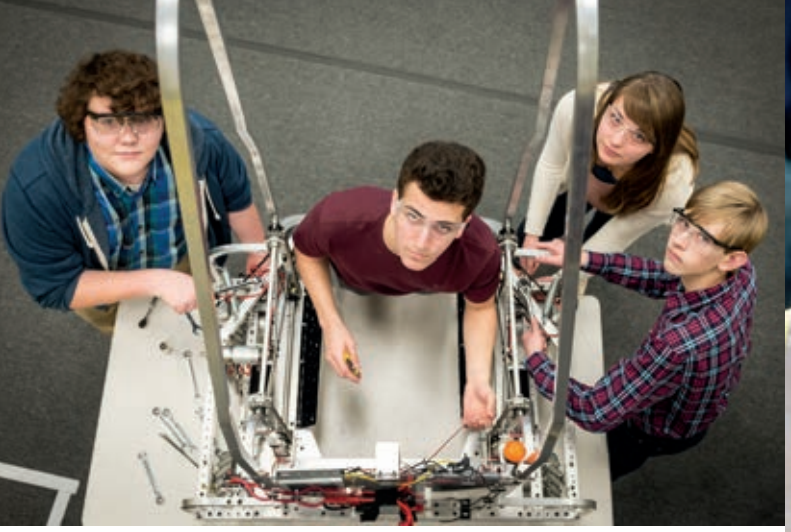
This is not your ordinary high school extracurricular activity. It's a battle of the 'bots, a clash of the cleverest minds.

Although not a traditional sporting event, the Palmetto Regional FIRST Robotics Competition has all the hallmarks of a high school football season or basketball championship bracket — months of preparation, dedication, skill and hard work. Most of all, the competition embodies a sense of teamwork and community beyond which high school students usually have access. And with 66 teams taking their turns on the floor, the competition is fierce.

Edmonds and Lamb are only two of the 26 students who spent countless hours after school and on weekends studying, designing, building, programming and strategically altering a robot at the Academy of Arts, Sciences and Technology, part of Horry County School District.

**Opposite:** A strobe light casts an orange glow on to Team 1287's robot.

**Below:** The crowd watches as Team 1287's drive team members, wearing yellow safety vests, manipulate their robot during a match at the Palmetto Regional FIRST Robotics Competition in Myrtle Beach. The drive team is made up of Maxwell Lamb (behind the Lexan) Remy Diangelo and Lince Cook.



These talented students, who dubbed themselves "Aluminum Assault," make up Team 1287, a FIRST Robotics Team sponsored by Santee Cooper, Horry County Schools and Grand Strand Technology Council.

In addition to the sponsorship, Santee Cooper is highly involved with other aspects of FIRST Robotics, including having employees sit on the steering committee, set up and tear down of the playing field, and volunteering during matches. Santee Cooper employees also make up three of the eight professionals who mentor Team 1287 through their trials, tribulations and triumphs.

"As a mentor, I get to come in and give these students guidance. I don't profess to know everything and neither do our other mentors, parents and teachers. We each have different expertise, which can also be said of the students," Mark Peterson explained, with more than a hint of pride for the team members.

Peterson, a Santee Cooper senior customer services representative in Pawleys Island, spent 10 years in the U.S. Air Force and worked with electronics, avionics and navigation systems. He was a safety inspector for the robotics competition in 2013 and mentored a team from St. James High School in Murrells Inlet last year.

Peterson is passionate that the experience the robotics team members gain will help them with critical thinking, problem solving and interpersonal skills as they plot their futures.


**Bottom Left:** Santee Cooper Senior Engineer Tommy Earley has served as a mentor for Team 1287 for nine years.

**Top Left:** Blake Smith, Remy Diangelo, Sarah Miller and Justin Anderson work together on building the robot.

**Top Right:** Team 1287's Justin Anderson and Thomas Jay Anderson, along with a student from another robotics team, watch the competition.

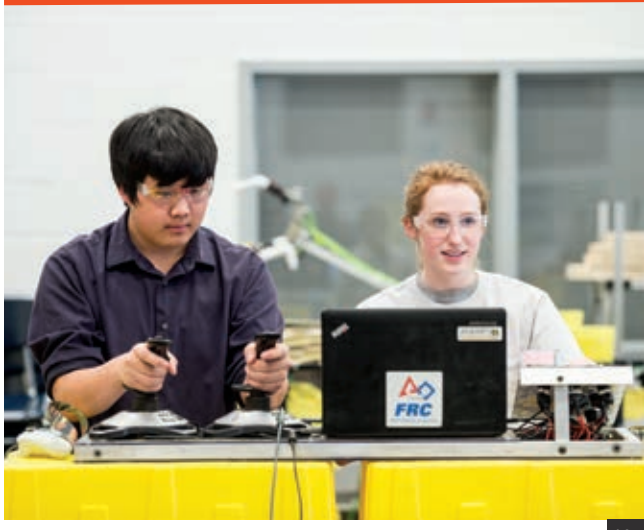
**Below:** The team's "buttoneer" controls the robot's actions.


**Left to Right:** A student shows off a mechanical component. Sarah Miller and Ian Lackey proudly waive their team's flag. Remy Diangelo and Stewart Sellers get hands on experience. Emanuel Cheng and Aubrey Edmonds work on the robot's control system.

"I see so much potential in these students. When building the robot, you can't take shortcuts or it will bite you in the end. Sometimes you get a serving of humble pie, and that's a valuable lesson to learn," Peterson said. "It's not just about them saying 'cool, I get to drive a robot.' It's hard work and teamwork, within each team and with other teams. We work together on solutions. And students who may be more apt to be in the background are now very much involved. These are our future leaders we're helping raise up.

"My grandpa was part of the generation to see the first car. My dad saw the first man land on the moon. And I saw computers become part of everyday life. Students like these were the ones who took us from car to the moon to the computer. And I believe these students will create the next big thing," Peterson said.

Tommy Earley has been mentoring Team 1287 for nine years and is currently the team co-leader with Warren "Bucky" Sellers, a pre-engineering instructor at the Academy and the patriarch of the team. Earley, who




FIRST
1287
1287

**Opposite:** Team 1287's robot racks up points during a match.

**Top to Bottom:** Foster Jaques helps reset the game's "litter." The drive team's Maxwell Lamb (l) and Remy Diangelo (r) control the robot during competition as mentor Jerry Lamb cheers them on. Members of the team move the robot to a match. Students work together to make mechanical adjustments.

is also on the planning committee for the Palmetto Regional, is a senior engineer for substation relay and control design at Santee Cooper.

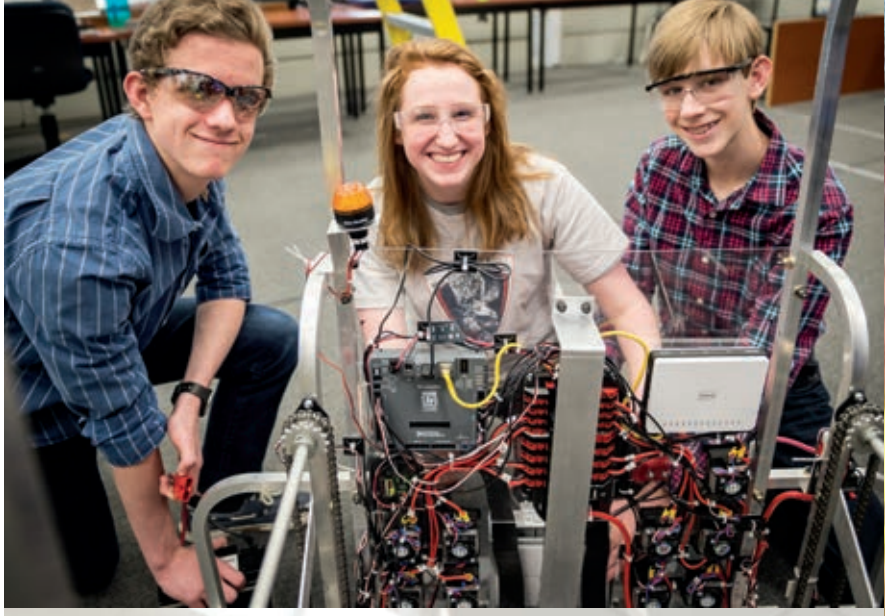
"This isn't just a bunch of teenagers getting together to build a robot. It's much bigger than that," Earley said. "Everyone has a role. These students are learning about problem solving and teamwork. They work together on robot designs and strategize about how to play the game. It takes research, trial and error, building and tweaking."

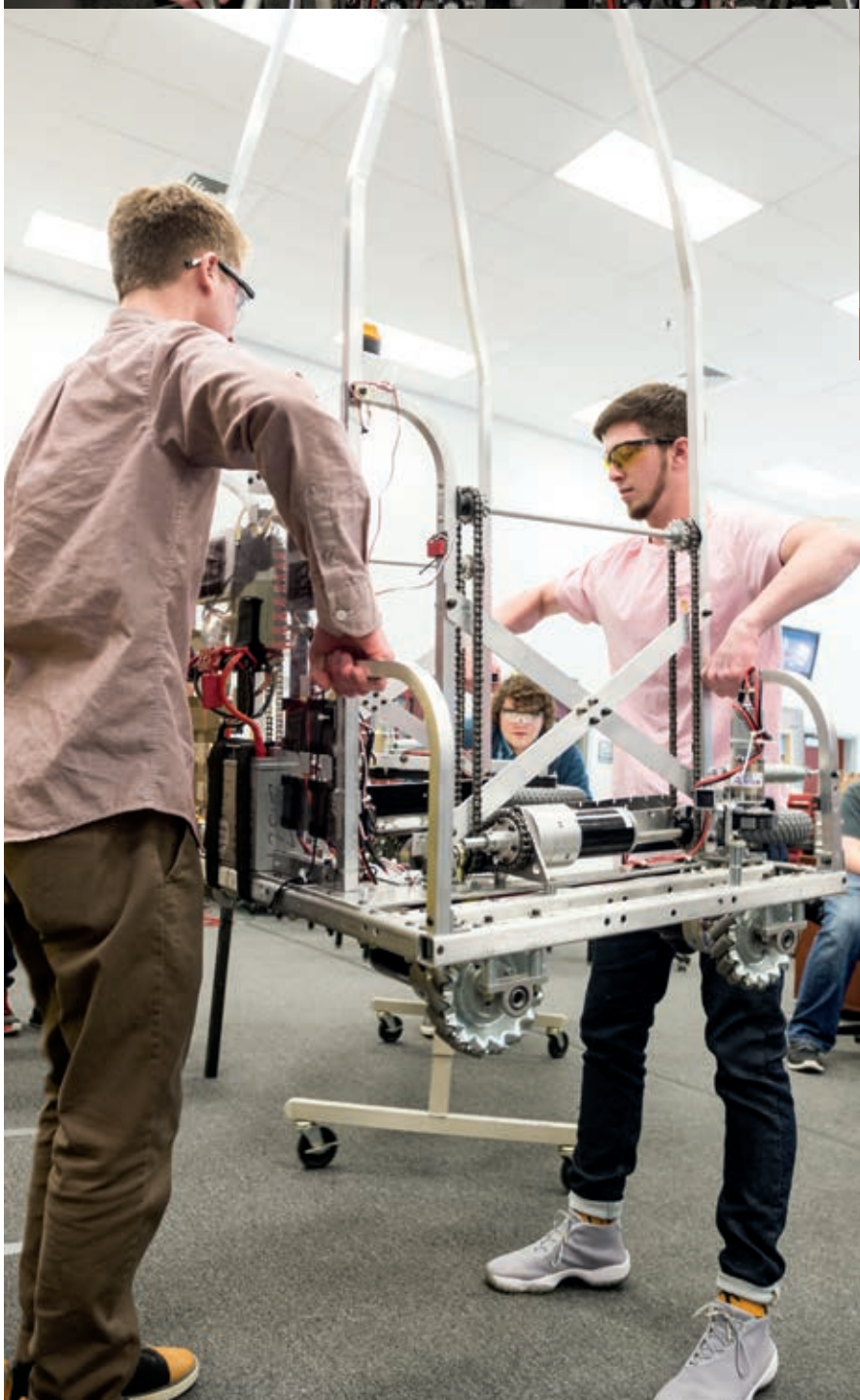
Teams get their first taste of what their robots will have to accomplish when they receive their kits less than two months before the first competition. They have only six weeks to build, program and strategize.

"I came into the pre-engineering major a couple of days late, after switching from AP chemistry. Mr. Sellers started giving lectures — he likes to do that. He started talking about robotics and the kit and the game, and I decided to try it out," Samantha Shrier said. Shrier is 16 years old and a high school junior at the Academy. "We got the



**Top to Bottom:** Carson Hardy, Aubrey Edmonds and Justin Anderson focus on teamwork. Connor Johnston and Zachariah Gregory move the robot during a practice session at the Academy.





startup kit first. The next day after school we started brainstorming."

In this year's game, robots have to be built and programmed to be able to pick up and stack rectangular, plastic containers. Being able to stack the containers, and put a full-sized recycle tub on the top of the stack, can equal big points at competition. And if you can add litter — in the form of pool noodles — to the recycle tub, that's an ever bigger bonus.

Team 1287 toyed with different ideas and prototypes, settling on building a robot with an elevator design. Their robot pulls in containers one at a time with its rotating wheels, and elevates each one before pulling in another container below the first. In all, it can stack the recycle tub atop five containers, move the stack to a desired location on the playing field and release the stack to earn points.

Building a robot that can do all of this hones mental and physical skills, and can get students out of their comfort zones.

"Before I did this, I had no idea how to use any of these tools," Shrier said. Then she cocks her head and explains, confidently, that she can now use a drill press, vertical and horizontal band saws, and countless others.

Shrier's pride and confidence can be seen in many of the members of Team 1287. It was well earned, which is a point the mentors and students are not shy about professing. The biggest theme throughout the process of building the robot and competing, though, is teamwork.

Remy Diangelo, a 16-year-old sophomore at Myrtle Beach High School, is a member of the competition drive team for Aluminum

The playing field is abuzz with excitement and energy as teams move their robots in place for an upcoming match.

Assault. He has been involved with robotics since seventh grade and plans to continue through his senior year.

“Teamwork is a very large part of this competition. You have to work through a lot of different problems, and you have to work through adversity,” Diangelo said. “This will help me a lot, especially with college and a career. It’s a great experience being part of it.”

“We worked together to do specific things, but we were never on our own,” Edmonds said. “Robotics gets us involved in the community and the community involved in us. It gets us involved in engineering and building a background for ourselves. We learned the mechanics and worked as a team.”

Teamwork, interpersonal skills, physical skills and problem solving are all part of the experience. But Edmonds pointed out one more reason she and her teammates are involved.

“It’s fun.”

On the day of their first competition, members of Team 1287 get down to business. They’ve already completed their first match of the day. The drive team safely rolls their robot through the crowd and into the pits, an area where each team has a roped off section of the floor that doubles as a workshop. Here, team members make tactical, minor adjustments to their robot. If not working on a robot, almost everyone in the pits is either admiring different teams’ designs or conspiring with other teams that will become their partners for the next match.

Back out in the auditorium where the matches are taking place, other students continue to study the playing field, taking statistics on each robot in action and noting its strengths and weaknesses. Two team members grasp the edges of a flag they wave in support of Aluminum Assault. Everyone on the team has a job, and everyone has a stake in their team’s success.

All in all, Team 1287 fared well in some matches and fell short in others, which is all part of the experience. Team members have learned how to think on their feet, work together to solve problems, and adjust to their surroundings. They’re pleased with how their robot can perform, and they now have their sights set on other regional events and the championship event in St. Louis.

Whether Team 1287 goes to the championships or not, these students have had an incredible experience and learned lessons that will carry them into college and a career. As they say, it’s not whether you win or lose, it’s how you play the game.


VESPOLI
EAT. SLEEP.

*By*
**WILLARD STRONG**

*Photography by*
**JIM HUFF**

# ROW!

On Feb. 21 at 10 p.m., a group of athletes from two New Hampshire high schools boarded a passenger train in Massachusetts for a 16-hour train excursion. Their destination is the Amtrak station in Kingstree, S.C., where they were met by vans to transport them to their ultimate destination, 38 miles away.

That destination was Clemson University's Robert M. Cooper Leadership Center, situated on Lake Marion's Wyboo Creek, between Manning and Summerton.

Just who are these athletes and why are they coming to rural Clarendon County in the dead of winter?

The answer is an enduring passion for the club sport of rowing, often called "crew." Since 1992, high school and college rowing teams have been coming to Camp

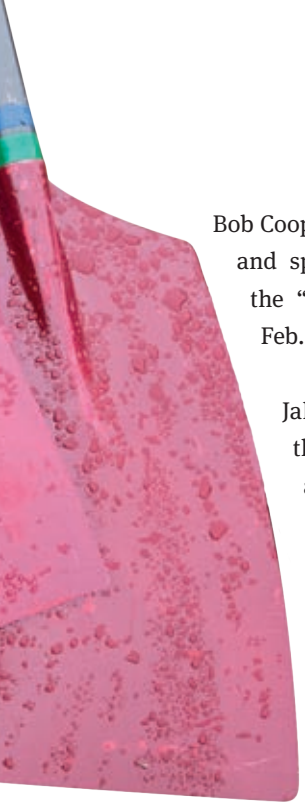
**Previous page:** The men's and women's rowing team from Bowdoin College take to the water near Camp Bob Cooper on Lake Marion's Wyboo Creek during their recent spring break. It's a long trek, but the Brunswick, Maine, school has found this is an ideal place to train in mid-February as the teams prepare for the fall rowing season.

**Above:** Oars and the most efficient use thereof are critical to a successful rowing team.

**Left:** The Bowdoin women's team trains on the water three times a day.

**Opposite top:** A member of the University of Pittsburgh's women's team prepares to hit the water.

**Opposite below:** The men's team from Concord High School makes sure everything is shipshape before boarding.



Bob Cooper to train during winter and spring breaks. This year, the "crew season" began on Feb. 15 and ended April 11.

Jake McClure, who directs the program, said the attractiveness of the 115-acre waterfront facility, featuring coves and long stretches of open water, has grown tremendously in the 23 years since the first team of rowers arrived. This year, about 1,500 rowers will experience the camp, many of whom are repeat customers.

"We started crew with one team and it has evolved into averaging around 25, which is exactly how many teams we have booked this year," said McClure. "Our slogan for crew is 'Eat. Sleep. Row.' The ability to accommodate rowing teams with food, lodging and other amenities, in addition to a great waterway for training, is really what sets us apart from other facilities. There are facilities that offer training accommodations, but are unable to offer other services. Camp Bob Cooper offers a one-stop shop to these teams, which lowers the overall costs, and lessens the stress for group leaders."

The two high schools at Camp Bob Cooper for the second week of the 2015 crew season were Hollis/Brookline and Concord. Located in Hollis, N.H., Hollis/Brookline High School is an 18-year-old public school with an enrollment of nearly 1,000 students. This was their first trip to Camp Bob Cooper. Concord High School is in Concord, N.H. and traces its roots to 1846. It has a student body of around 1,800.

H/B and Concord Crew are rivals on the water and fierce competitors. All that is put aside in

South Carolina. Camaraderie and cooperation reign as the teams work to prepare for regattas and the quest for medals and trophies begins. Crew teams keep coming back year after year, including universities such as Brandeis University, Carnegie Mellon, the University of Pittsburgh and the University of Connecticut.

"This is a facility that is unique and provides all we need to improve as a team," said Head Concord Crew Coach Jay Printzlau. "We enjoy coming here because the weather is usually good this time of year. Let's face it, the weather in New Hampshire is usually much colder and has been unusually so this year. This trip gives us a chance to accomplish a lot of things in a relatively short period of time."

Printzlau has been to Camp Bob Cooper before, and many students and staff have been coming for years. He said the team usually trains and competes in eight man, 57-foot fiberglass boats or "shells" that weigh 300 pounds. The four-man boats are 40 feet long. A typical 57 footer can cost up to $40,000. The oars provide the stability on the water and if not for them, the boat would simply tip over. They are high tech craft, built for speed, not comfort. Bringing it all together on a boat is the coxswain.

Said Printzlau, "The coxswain is the person who steers the boat, speaks the commands and is responsible for motivating the rowers. It's a very important job and as you might imagine, leadership is the overriding quality for someone in that position."

"It's so cool being here," said 14-year-old Sophia Johnson, a Concord Crew team member. "This is my fourth season on crew and coming down, it gives us a chance to live with our team. It's got miles of water. It has gym space."

As with many of the rowers, Johnson has big plans and mentioned an Ivy League school as a possible destination in her pursuit of higher learning. She wants to be a physician.

"It's a great time to connect," said 17-year-

**Above:** The Bowdoin women's team takes commands from the coxswain, the team member at the rear facing the rowers.

**Right:** "It's become my home away from home," 15-year-old Meghan Smith, the coxswain for Concord Crew, says of Camp Bob Cooper. "I want to row in college. I've been discussing Yale."

**Above:** Sophia Johnson, 14, says being at Camp Bob Cooper "gives us a chance to live with our team. It's so cool. It's got miles of water here."

**Right:** Concord High School's men's team casts off for an afternoon training session.

old Brandon Fox, who rows for H/B's 60-member team. "This is the first sport I've ever done. Before, I was just very focused on my school work."

Although he contemplated quitting at one point, he's glad he stuck with it, citing the character, teamwork and overall positive personal development that come with the sport. Fox has his sights set on M.I.T., where he wants to study electrical engineering or "some form of computer science."

"It's become my home away from home being a part of all this," said Meghan Smith, 15, coxswain for Concord Crew, which has been coming to the camp for nearly 15 years. "It's just as much a vacation as it is training, and we train hard. I want to row in college." She mentions Yale.

John Sengstaken, president of the H/B Crew Club, said in his years with crew, he's seen a lot of adolescents grow up, gaining confidence in what they're doing,

**Above:** Gil Birney has been training rowers for 15 years at Bowdoin College. In a coaching session held at the camp's Walter Cox/Santee Cooper Education Building, Birney sums up his coaching message to the men's and women's teams: "How passionate are you about making the boat go?"

**Opposite above:** This message on a white board in one of the camp's classrooms gives a quick overview of things teams work on when rowing. A "catch" is the technique in which the oar meets the water.

development that will serve them well in life and any vocation they pursue.

There is no "light outs" Sengstaken said, because the day's exhausting schedule gets the rowers in bed and ready to do it all over again the next morning. But it's not all work and no play, as McClure attests. Some teams do avail themselves of the region.

"Most teams that take a day trip will go to Charleston," he said. "Many teams will go offsite for a meal occasionally to restaurants in Manning, Summerton or Santee. Some teams also choose to do some of our activities onsite. Our camp offers teams access to two high ropes courses, a low ropes course, a climbing wall, paintball and skeet shooting."

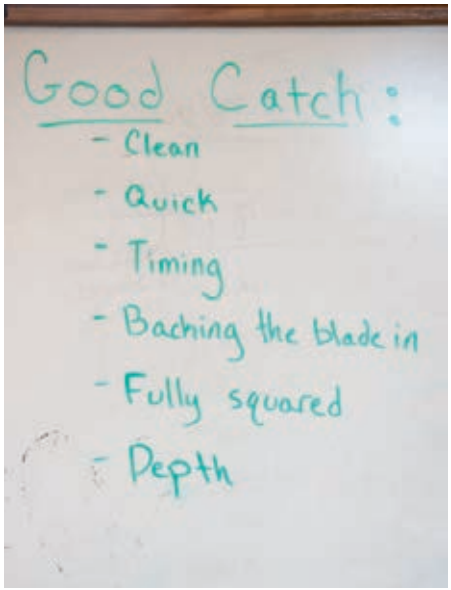
The crew teams depend on adult support and one example is Joan Vallieres, who's a Concord Crew "crew mom and character coach." This is her fourth trip to the camp.

"The people here are wonderful," she said. "It is such an outstanding place for us to come. I look forward to it each and every year."

McClure said the camp can comfortably accommodate 10 teams at one time and a typical team has about 60 rowers and two coaches.

"It's not uncommon to have 500 to 550 onsite," said McClure, who can provide 699 beds. And while the campers interact with one another, a big advantage is that the camp's isolation allows rowers, coaches and the support staff to stay on task.

Said McClure, "Most college and high school athletes live very busy lives. In addition to the commitment to their sport, they have classes, jobs, family, friends and volunteer opportunities. Training at our camp provides one week where an




## TYPICAL DAILY CREW SCHEDULE AT CAMP BOB COOPER

| | |
|---|---|
| 6 a.m. | rise and light snack |
| 6:30 a.m. | stretching exercise |
| 7 a.m. | on the water |
| 10 a.m. | meal and break |
| Noon | back on the water |
| 2 p.m. | meal |
| 3:30 p.m. | back on the water |
| 6 p.m. | meal |
| 8 p.m. | video review of the day's practice |


athlete can focus exclusively on his or her sport, while strengthening relationships with teammates and coaches. We do have wireless Internet available to students so that they can do school work and be in touch with family and friends."

While modern marketing can reap dividends, the camp has grown in popularity largely because of the reviews crew teams give other teams.

"We have placed advertisements in the past with a few rowing magazines," McClure said. "The most significant marketing strategy for crew is word of mouth. We work hard to make sure that every team has a great time while they are here. Those teams have, in many cases, told other teams about our site, which has led to the majority of our growth."

Another dividend is that the locals look forward to seeing the rowers on the water during an otherwise fairly slow time of year. This is before things get really busy on the Santee Cooper Lakes beginning with Memorial Day weekend and on into the summer months.

"Every year, local business owners and residents in Clarendon County, especially those located near Lake Marion, express excitement over seeing rowing teams come to Camp Bob Cooper," said McClure. "This program is not only an important revenue generator for our site, but for the local Clarendon County economy, and teams patronizing local restaurants and retailers is greatly appreciated."

Crew isn't the only opportunity that is available for the public. In addition to a regular 4-H camp during the summer, the facility is able to host retreats for churches, schools, nonprofits and businesses. It can also host other athletic teams and has field space that accommodates football, lacrosse or soccer teams.

The property at Camp Bob Cooper is owned by Santee Cooper, which acquired the tract during the construction of the Santee Cooper Hydroelectric and Navigation Project from 1939 to 1942. It was the site of work camp No. 32, which featured wooden barracks for project workers. The tract is leased to Clemson University, and the camp is maintained and operated by Youth Learning Institute, headquartered in Pickens, S.C.

# Looking back on an impressive growth spurt

By Kevin F. Langston

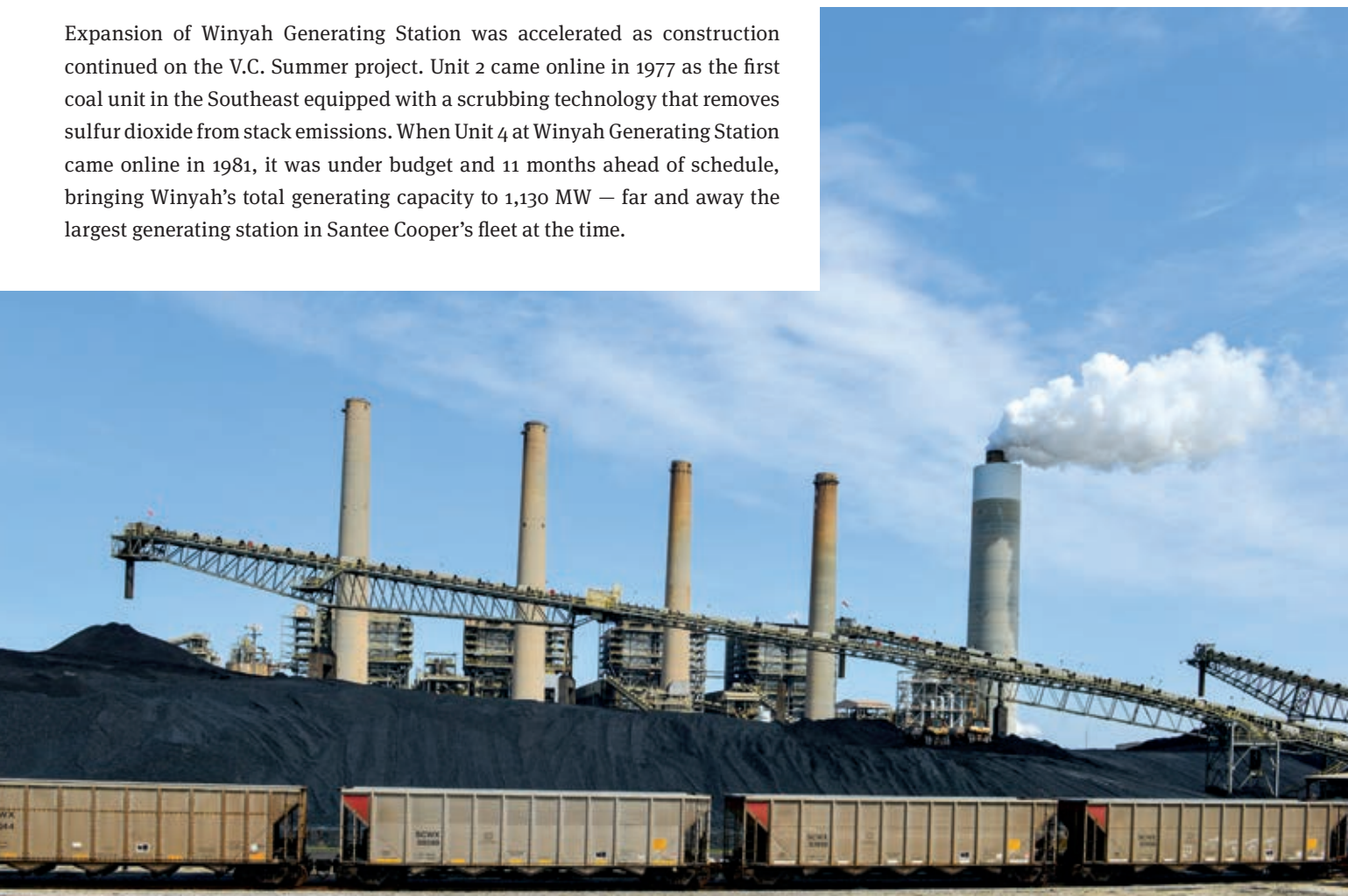
Forty years ago, on Jan. 27, 1975, Santee Cooper dedicated the first unit at Winyah Generating Station near Georgetown.

The 275-megawatt (MW) unit ushered in an unprecedented eight-year period where Santee Cooper added more than 2,000 MW of new baseload capacity. Three additional 285-MW units were added to Winyah in 1977, 1980 and 1981, and Cross Generating Station's 570-MW Unit 2 was completed in 1983. Also in 1983, Santee Cooper began receiving a third of the output, or 318MW, from the 973-MW V.C. Summer Nuclear Station in Jenkinsville.

Until the Grainger Generating Station entered commercial operation with 166 MW in 1966, the five hydro units at Jefferies Generating Station provided the bulk of Santee Cooper's power.

As the 1970s dawned, Santee Cooper evaluated its resources and future needs. Hydroelectric options were limited, and construction on Winyah's first coal unit began in 1972. At the same time, Santee Cooper began talks with South Carolina Electric & Gas Co. about becoming a co-owner of the investor owned utility's nuclear project in Fairfield County.

Expansion of Winyah Generating Station was accelerated as construction continued on the V.C. Summer project. Unit 2 came online in 1977 as the first coal unit in the Southeast equipped with a scrubbing technology that removes sulfur dioxide from stack emissions. When Unit 4 at Winyah Generating Station came online in 1981, it was under budget and 11 months ahead of schedule, bringing Winyah's total generating capacity to 1,130 MW — far and away the largest generating station in Santee Cooper's fleet at the time.



## Economic development made big strides in 2014

Santee Cooper's economic development activities in 2014 included working with South Carolina's 20 electric cooperatives, the state's regional economic development alliances, and approximately 100 city, county, state, chamber of commerce, and other economic development organizations.

The economic development team participated in 20 trade shows, site selector events and marketing missions promoting Santee Cooper and its customers to prospects in the automotive, aviation, marine, chemical, medical and data center industries. Santee Cooper also was heavily involved in state, regional and national networking opportunities.

Product development continued to be a focus for the economic development team. The Santee Cooper board approved more than $25 million in loans for cities, counties, cooperatives and economic development agencies to develop buildings and other commerce infrastructure to market to potential industrial prospects.

An additional $23 million of local resources was invested in these communities because of the loans, and the potential job creation and investment by industries and businesses is tremendous.

The South Carolina Power Team, Santee Cooper's economic development partnership with the electric cooperatives in South Carolina, significantly advanced development efforts statewide, especially in rural areas. In 2014, the efforts of Santee Cooper and its partners resulted in:

- Over 8,381 jobs
- Capital investment exceeding $923 million
- More than 71,800 kilovolt-amps of new load

Since 1988, the Power Team has been involved in 664 new industrial locations and existing industrial expansions representing more than $10 billion in capital investment, over 62,000 new jobs, and an increase of 1,224 millivolt-amps.

## Santee Cooper board approves 2015 bond sale

The Santee Cooper Board of Directors on Feb. 13 approved the sale of $1.1 billion in revenue obligation bonds during a special board meeting.

Nearly half of the amount was for refunding bonds to refinance a portion of Santee Cooper's debt. The refunding produced net present value savings of $58.8 million over the life of the bonds. The new money will be used for capital projects, primarily Santee Cooper's share in the ongoing construction of additional generating units at the V.C. Summer Nuclear Station.

## Santee Cooper receives high marks in customer satisfaction

Santee Cooper exceeded the national average in residential customer satisfaction and in customer service, reliability, rates, value and conservation, according to an annual independent survey conducted by MarketSearch.

The survey shows an overall satisfaction rate of 98.7 percent in 2014 from Santee Cooper's residential customers. Nationally, the satisfaction rate for other utilities is 85.6 percent.

Some of Santee Cooper's highest ratings are in the reliability and responsiveness category. The survey reveals 99 percent of customers are satisfied that Santee Cooper does what it can to keep outages to a minimum and 99.3 percent feel Santee Cooper restores power as quickly as possible after an outage.

When compared with rates for other products and services, 89.6 percent said they are satisfied with Santee Cooper's rates compared to the cost of other products and 86 percent agree that Santee Cooper power is worth the price they pay.

## 2014 Celebrate The Season raises over $112,000 for charity

The 2014 Celebrate The Season, supported by 51 local businesses and organizations, raised $112,544.29 for charities serving Berkeley County and the tri-county area.

Santee Cooper donated $81,392.91 in festival proceeds to the Coastal Community Foundation's Giving Back to Berkeley Fund. A second donation, of $15,000, went to the Berkeley County Museum and Heritage Center.

Santee Cooper is title sponsor and organizer for Celebrate The Season and Tinsel Trot, which are held annually at the utility's Moncks Corner headquarters and its adjacent Old Santee Canal Park. Berkeley Electric Cooperative is the presenting sponsor of Celebrate The Season.

Along with Berkeley Electric Cooperative, major sponsors include Berkeley County, Goodwill Industries, and Home Telecom.

## Arctic blast triggers peak electrical demand

Record-low temperatures in South Carolina in February resulted in a new peak-demand record at Santee Cooper. The new peak record of approximately 5,869 megawatts was recorded between 7-8 a.m. on February 20, which surpassed the previous mark of 5,743 MW set in December 2010.

Gov. Nikki Haley, Santee Cooper and other South Carolina electric utilities joined together in calling on customers to use energy wisely during this bitter cold snap.

## Solar farm exceeds expectations during first year

In its first year of operation, the Colleton Solar Farm produced slightly more solar power than expected and demonstrated the benefits of panels that track the sun, even though they cost more than stationary panels.

Also, the severity of Winter Storm Pax in 2014 and a new system peak set this February highlighted the issue of the reliability of solar power to meet winter energy demands after the storm took the farm offline for three days. In its first year, the 15-acre site generated 4,687 megawatt-hours (MWh), which was 5 percent more than expected in year one. The 3-megawatt complex provides enough energy to power more than 300 homes.

The Colleton Solar Farm remains the largest solar installation in the history of South Carolina and builds on a 14-year renewable energy history for Santee Cooper and the electric cooperatives.

## Green Power powers RBC Heritage seven years in a row

The RBC Heritage Golf Tournament once again teamed up with Palmetto Electric Cooperative and Santee Cooper to power the event with 100 percent Green Power. RBC Heritage made its greens greener by purchasing Green Power from Palmetto Electric Cooperative for the duration of the 2015 tournament, which played April 13-19 at Harbour Town Golf Links on Hilton Head Island. RBC Heritage Presented by Boeing is the only PGA TOUR event in South Carolina and was the first major Green Power event in the state, back in 2009.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